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Fluid Sample Collection and Storage Device

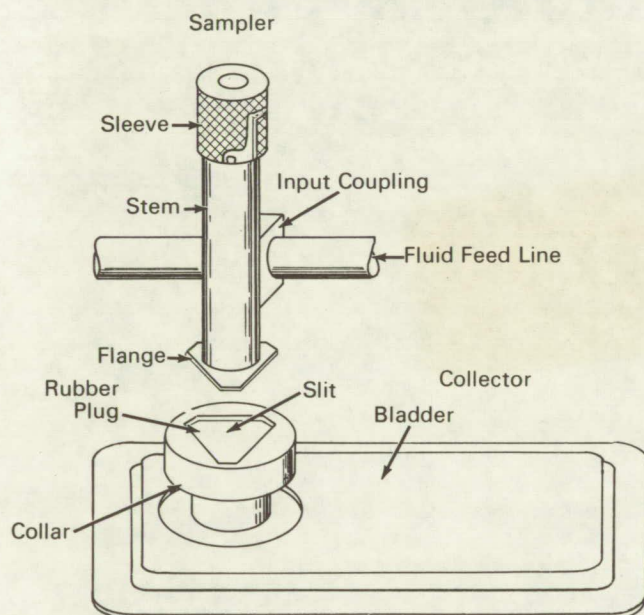


Figure 1. Fluid Sampling Device

A fluid sampling system has been developed which enables the user to quickly and easily collect a sample from a low-pressure fluid system and to store it for an indefinite period, with little risk of contamination of either the sample or the surrounding environment. Its two major components, a collector and a sampler, are shown in Figure 1.

The collector is a plastic bladder, fitted with a collar which is sealed with a tight-fitting, slitted rubber plug. The sampler comprises the following: 1) an input coupling, which connects the fluid feed line to the sampler; 2) a hollow stem, with a flange which fits into a recess on the collector collar; 3) a hollow probe inside the stem, which may be extended through the

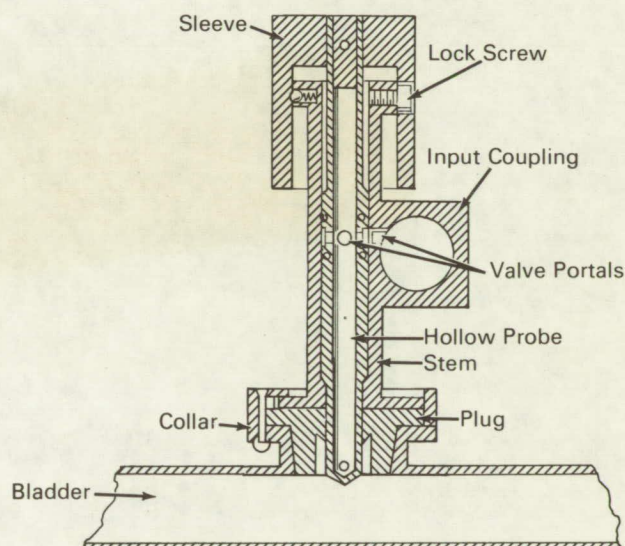


Figure 2. Cross-section of Fluid Sampling Device

rubber plug into the bladder; 4) a double-acting valve, which passes fluid from the input coupling through the hollow probe and into the bladder, only after the probe has been extended and then rotated into the correct orientation; and 5) a sleeve, mounted outside the stem, which controls the extension and rotation of the probe, and which is furnished with a lock screw to secure the probe in any desired position. The cross-section presented in Figure 2 shows the sampler and the collector coupled, with the probe extended through the plug and the valve closed by a 90 degree rotation of the sleeve.

After the sample has been collected, the valve is closed, the probe is withdrawn, and the collector

(continued overleaf)

is separated from the sampler. The slit in the rubber plug recloses, sealing the sample within the bladder.

Note:

Requests for further information may be directed to:
Technology Utilization Officer
Manned Spacecraft Center, Code BM7
Houston, Texas 77058
Reference: TSP69-10816

Patent status:

This invention has been patented by NASA (U.S. Patent No. 3438263), April 15, 1969, and royalty-

free license rights will be granted for its commercial development. Inquiries about obtaining a license should be addressed to NASA, Code GP, Washington, D.C. 20546.

Source: David Cohen and Samuel E. Stone of
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